東京大学微細構造解析プラットフォーム
公開講演会

"Seeing Atoms More Clearly"
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The properties of many exciting new materials and devices are becoming more dependent on their structural details down to the level of single atoms. Thus, characterization of the atomic configurations and electronic structure of matter at the atomic scale is becoming a more vital part of nanoscience. The combination of atomic resolution Z-contrast imaging and electron energy-loss spectroscopy (EELS) using a scanning transmission electron microscope (STEM) is a powerful approach to link the atomic and electronic structures to properties allowing materials, nanoscale systems and interfaces to be probed in unprecedented detail. Developments in correcting the aberrations of the lenses in the electron microscope have pushed the achievable spatial resolution down to 0.06 nm at 200 kV with accompanying improvements in sensitivity for imaging and spectroscopy. As important as these breakthroughs are for atomic scale characterization, aberration-correction has also lead to additional benefits for imaging and spectroscopy. These achievements are revolutionizing materials characterization. In this talk, past and on-going examples of the characterization of materials using aberration-corrected STEM and EELS will be presented.

Oct 24 (Wed) 2018 16:00～17:30
Main meeting room at Institute of Engineering Innovation, UT
(工学部総合研究機構　９号館１階　大会議室)
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